

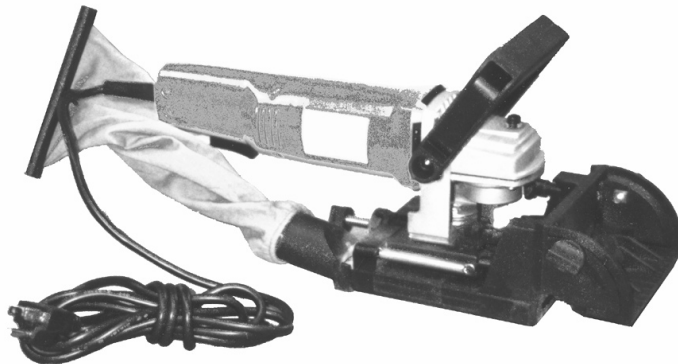
CHICAGO
Electric Power Tools

PLATE JOINER

4 INCH

Model 38437

ASSEMBLY and OPERATING INSTRUCTIONS



Distributed Exclusively by Harbor Freight Tools®

3491 Mission Oaks Blvd., Camarillo, CA 93011

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For technical questions and replacement parts, please call 1-800-444-3353

Specifications

Motor Speed	10,000 RPM (no load)
Power rating	120 VAC at 60 Hz, single phase, 6 A
Blade	4 inch diameter
Fence Adjustments	Max depth: 1-1/8 inches; Max. angle: 45 degrees
Preset Depth Stops	0, 10, and 20
Power Cord	18 AWG, 3-prong plug

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **Do not force tool.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.
6. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. Do not use a tool for a purpose for which it was not intended.
7. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.

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8. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
9. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
10. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
11. **Disconnect power.** Unplug charger when not in use.
12. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.
13. **Avoid unintentional starting.** Be sure the switch is in the Off position when not in use and before plugging in. Do not carry any tool with your finger on the trigger, whether it is plugged in or not.
14. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
15. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.
16. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
17. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
18. **Secure Work.** Use clamps or a vise to hold work. It is safer than using your hands and it frees up both hands to operate the tool.
19. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

Unpacking

When unpacking, check to make sure the following parts are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

ACCESSORIES
Assorted biscuits: 0, 10, 20 gauge
Carbon motor brush set
4 mm Hex wrench
Arbor wrench
Glue bottle

Operation

Part Numbers Used Below Refer to the Parts List and Assembly Drawings On Pages 8 and 9.

Attaching Dust Bag

For efficient dust pickup, empty bag frequently.

1. To install Dust Bag (45), slide bag connector onto dust porthole on Joiner (43) until it snaps into place.
2. To remove, pull release tab on right side of bag connector and slide bag off.
3. To empty Dust Bag, remove Bag Clamp (63) from power cord and slide plastic clip off large end of bag. Do this over a trash can.

Adjusting Front Fence

1. To remove Adjustable Front Fence (44), remove the two Lock Knobs (59) and slide the retaining Bolts (57) out of the front fence assembly, and remove fence.
2. To attach the Adjustable Front Fence (44), insert the two fence bolts through the two holes in front of the fence, and through the Joiner (43).

Note: The lower holes in front of Joiner contain nuts which may be used to fasten a fixed auxiliary fence accessory, but are not used with the Adjustable Front Fence.

3. To reposition Adjustable Front Fence (44), loosen the two Lock Knobs (59), slide the fence up or down to desired position. Retighten Lock Knobs. The front of the base plate has a height scale to help position the fence.

Setting Depth Stops

The Plate Joiner features a 3-position depth stop wheel with three notches indicating different depths. For example, when using a #0 plate, rotate the Depth Adjusting Dial (48) to the notch marked "0".

1. Pull the Depth Adjusting Dial (48) out to disengage and rotate to the desired notch (0, 10, or 20). Reengage Dial.
2. Turn tool upside down and place Adjustable Front Fence (44) against a solid surface, push forward on the tool until it stops and is held in position.
3. Check to see where the indicator lines up on the depth scale. The indicator should be slightly past the depth number selected (0, 10, or 20).
4. If the indicator does not line up (step 3), rotate the Long Screw (46) one way or the other until the indicator lines up on the depth scale (step 3).

Changing Blades

Warning: To prevent personal injury, always disconnect the power to the tool before removing or installing blades.

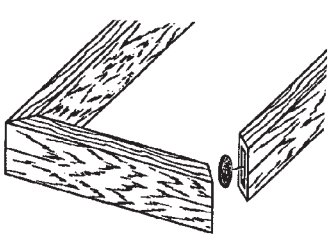
1. Disconnect power and turn tool upside down.
2. Loosen screws (56) in Adjustable Front Fence (44) and lower fence to expose the two screws that hold the base assembly together.
3. Using the Hex Wrench, remove both screws from front section of Joiner (43) assembly.
4. Place the Arbor Wrench (included accessory) on spindle and hold to prevent the spindle from rotating.
5. Place an adjustable wrench (or 24 mm wrench) on the Blade Bolt (62) and loosen counterclockwise, removing bolt.
6. Slide Cutting Blade (61) out, noting the direction of the blade teeth.
7. Install the new Cutting Blade onto the bushing, making sure blade teeth are facing the correct direction (see arrow on illustration, next page).
8. Replace Blade Bolt (62) and tighten clockwise until secure.
9. Reassemble Adjustable Front Fence (44) and lower fence assembly to Joiner base assembly using the two screws.

Locking On/Off Switch

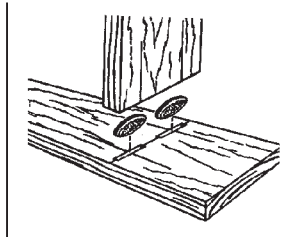
The Plate Joiner Switch (35) is located under the Hold Covers (28 & 29). The black push button on the left side of the cover locks the switch in the On position for long cutting operations.

1. To turn the tool On without locking it, press and hold the Switch button in. When pressure is released, the switch button snaps back to the Off position.
2. To lock the Switch On, press and hold the Switch button in, and then press in the black pushbutton on the left side of the handle.
3. To unlock the Switch from the On position, press and release the Switch button.

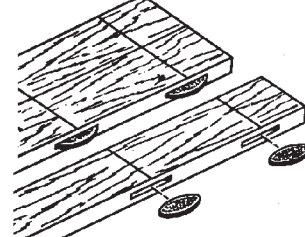
Typical Joiner Applications



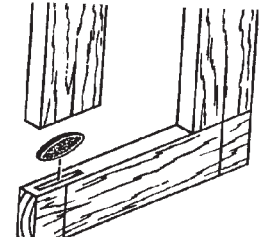
Miter Joints



T-Joints



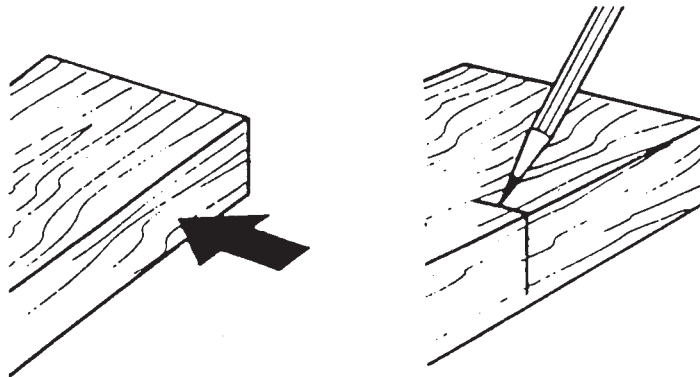
Edge to Edge Cuts



Butt Joints

Marking Slot Locations for Standard Cuts

1. Always begin with the Joiner base cutting into the end of the wood, rather than the face as illustrated below.
2. Mark the center of slot at a point as least 2-1/2 inches from outer edge of the board. Allow at least 1 inch between slots in multiple plate applications for best results. Mark all slots on both boards at the same time to assure proper alignment.
3. Align center line on face plate with the pencil mark on wood as illustrated below.



4. Grasp the tool with both hands, turn power On and push the tool forward smoothly. When Joiner base assembly has butted completely against wood surface to be cut, pull back and then turn power Off.

Marking Slot Locations for Other Types of Cuts

When making preparations for cutting slots for T-butt, miter, edge-to-edge, leg and rail, and square pattern joints, there are two important steps to ensure proper alignment of the joints.

1. Align all boards as you want them to appear when finished, then mark the center line for the slots on all boards at the same time.
2. Set plate depth before making cuts.

Maintenance

1. Disconnect tool power before cleaning.
2. Wearing ANSI approved safety glasses, use compressed air to blow the tool clean.
3. Do not insert pointed objects into holes in attempt to clean them out.
4. Use a mild soap and clean, damp rag to clean tool.

Caution: Certain cleaning agents and solvents can damage plastic parts. Some of these are: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents that contain ammonia.

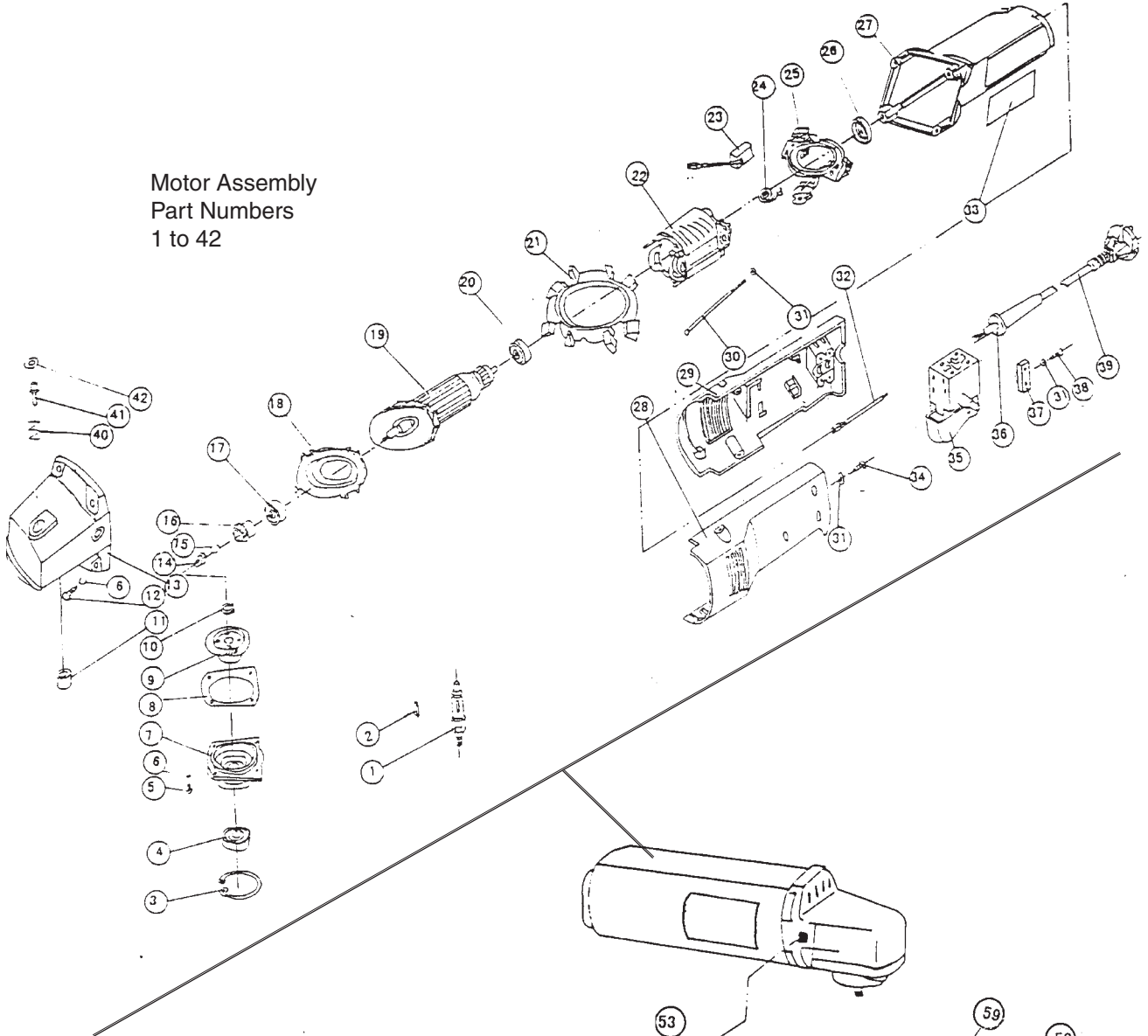
Parts List

Item	Description	Qty
1	Spindle	1
2	Straight Key 4 x 12	1
3	Circlips for Hole	1
4	Ball Bearing 80101	1
5	Screw M4 x 14	4
6	Washer M4	8
7	Packing Gland	1
8	Plate	2
9	Gear	1
10	Spindle Ring	1
11	Spindle Sleeve	1
12	Tapping Screw	4
13	Gear Cover	1
14	Nut M6	1
15	Washer M6	1
16	Pinion	1
17	Ball Bearing 80100	1
18	Clamp	1
19	Armature Assembly	1
20	Ball Bearing 80018	1
21	Hoop	1
22	Stator Assembly	1
23	Carbon Brush	2
24	Spring	2
25	Brush Hold Assembly	1
26	Rubber Gauge Washer	1
27	Housing Assembly	1
28	Hold Cover	1
29	Hold Cover	1
30	Tapping Screw	2
31	Washer M4	8
32	Wire Assembly	2

Item	Description	Qty
33	Name Plate	1
34	Tapping Screw	4
35	Switch	1
36	Cord Armor	1
37	Cord Clip	1
38	Tapping Screw	2
39	Cord Assembly	1
40	Spring	1
41	Lock Pin	1
42	Washer	1
43	Joiner	1
44	Adjustable Front Fence	1
45	Dust Bag	1
46	Long Screw	1
47	Spring	1
48	Depth Adjusting Dial	1
49	Square Nut	1
50	L-shaped Guide	2
51	Bolt M6	2
52	Washer M6	2
53	Top Handle	1
54	Allen Screw M10	2
55	Square Nut	2
56	Screw	2
57	Bolt	2
58	Plastic Sleeve	2
59	Lock Knob	2
60	Spacer	2
61	Cutting Blade	1
62	Blade Bolt	1
63	Bag Clamp	1

Assembly Drawings

Motor Assembly
Part Numbers
1 to 42



Joiner Assembly
Part Numbers
43 to 63

